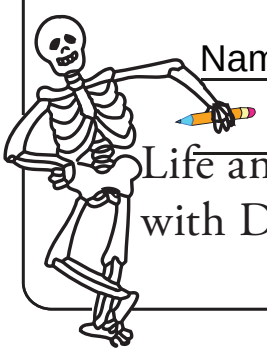
De-COMPOSITION BOOK



Name: _____

_____

Life and Death
with Decomposers **4.2.c.**

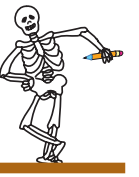
193652-23001-759821-0012

09 >

Table of Contents

Blank

Decomposition Vocabulary



Agriculture: _____

_____

Bacteria: _____

_____

Compost: _____

_____

Decomposers: _____

_____

Decomposition: _____

_____

Ecosystem: _____

_____

Fungus: _____

_____

Humus: _____

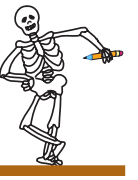
_____

Landfill: _____

_____

Matter: _____

_____



Microorganism: _____

_____

Nutrient: _____

_____

Scavenger: _____

_____

Topsoil: _____

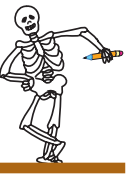
_____

Waste: _____

_____

Waste Management: _____

_____



Section 1: Predictions

What do you think will happen to the banana slice in the bag with yeast?

I predict that _____

_____

_____

What do you think will happen to the banana slice in the bag without yeast?

I predict that _____

_____

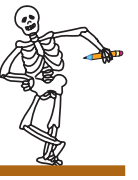
_____

Section 2: Observations

Use this space to draw what the banana slices look like.

A. Beginning Date: _____

Bag with Yeast	Bag without Yeast



Draw what you see in each bag:

B. Ending Date: _____

Bag with Yeast	Bag with No Yeast

Section 3: Questions

What decomposers did you learn about in this lesson?

_____

_____

_____

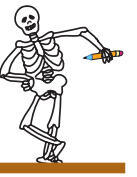
How are decomposers helpful?

_____

_____

_____

_____



Decomposition takes a team effort! Making it happen requires two kinds of organisms. You are about to see photos of both kinds of organisms.

Write the name of each organism you see next to the number of its photo:

1.	5.
2.	6.
3.	7.
4.	8.

How are scavengers and decomposers different?

How do decomposers and scavengers work together?

What do scavengers and decomposers get from eating dead things?

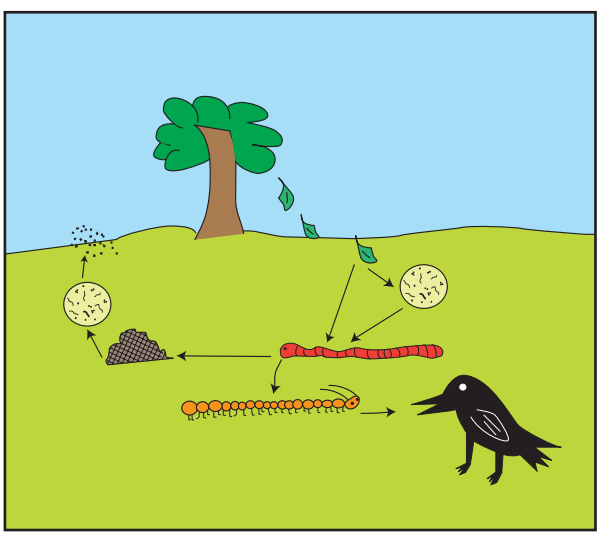
Decomposition in the Forest

A warm wind blows gently through the trees. A leaf falls from a tree to the forest floor. Bacteria from the soil move on to the leaf. They begin to feed on the leaf, breaking it down. As the bacteria get energy and nutrients from the leaf, they reproduce and grow. More bacteria begin to feed on the fallen leaf.

The leaf begins to show signs of decomposing. An earthworm breaking through the top of the soil swallows a piece of the leaf. The earthworm also swallows some soil along with bacteria and fungus living in the soil. The worm's insides grind up the leaf matter. The bacteria living in the worm's intestines help the worm digest the leaf matter. The worm gives off waste called "castings." The castings become part of the soil on the forest floor. Other bacteria and fungi begin to feed on the worm's castings.

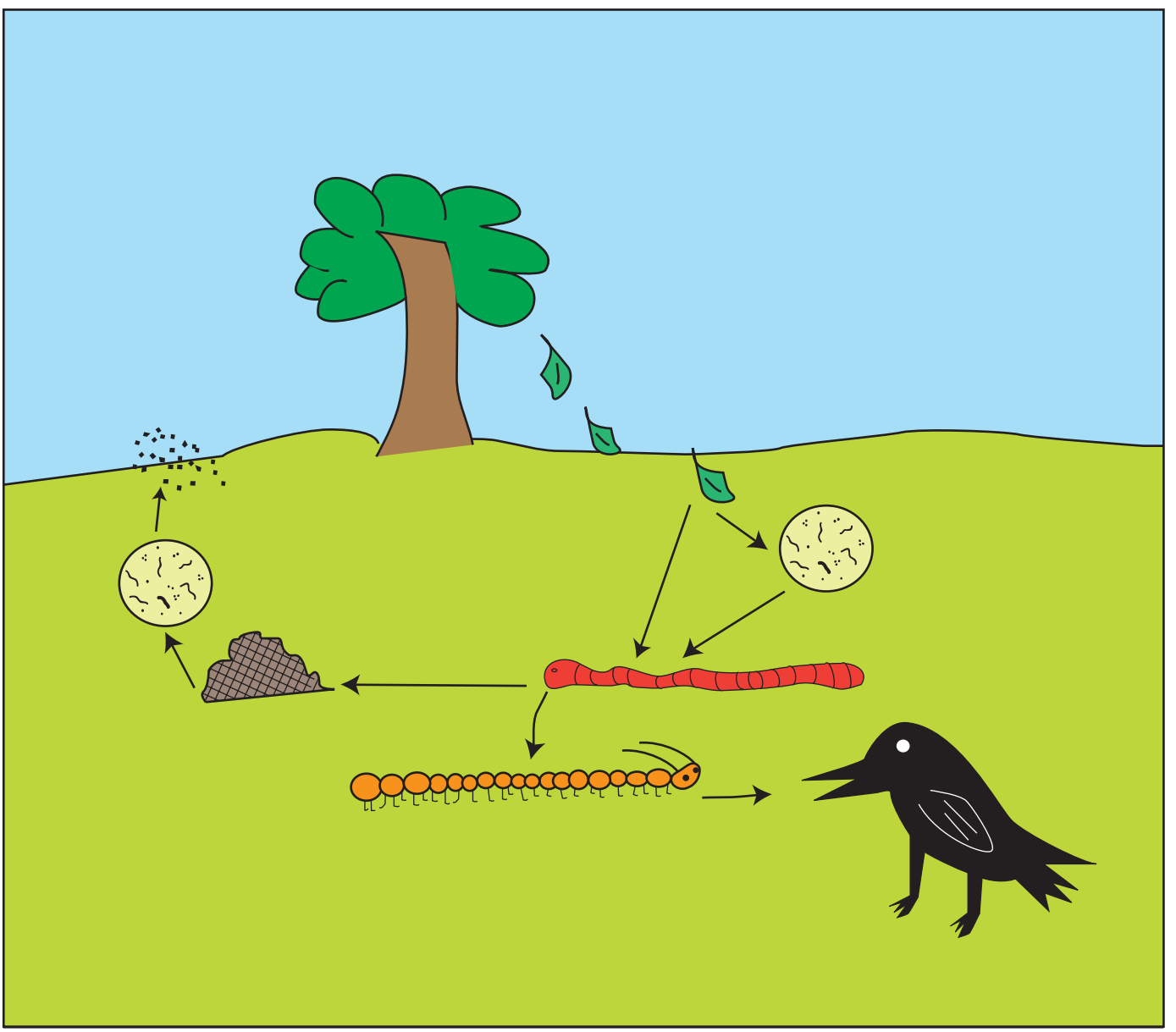
They decompose the castings and release the nutrients in them into the soil and air. The tree takes up some of these nutrients in its roots. Plants and animals in the forest breathe in nutrients in the air. The wind blows nutrients to other ecosystems.

A centipede crawling over the fallen leaves sees the earthworm. It catches and eats the worm. Just as the centipede finishes its meal, a bluebird spies it from a tree branch above. The bluebird flies down and snatches the centipede in its beak. Then it flies back up to the branch to enjoy its meal in the warm wind blowing through the trees.



Use words and arrows to show how the characters in the stories are connected.

Decomposition in the Forest



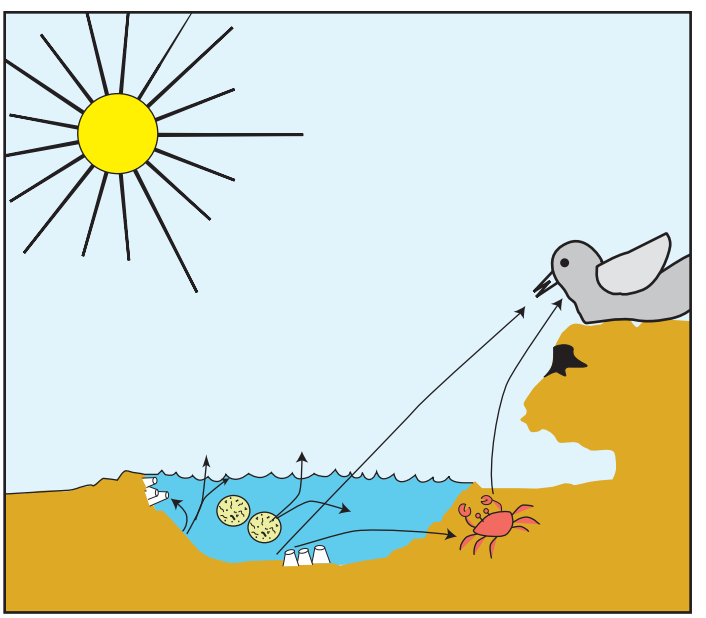
Decomposition at the Coast

As the tide comes in, a crab scampers out from under a rock. It heads over to a pool of ocean water the sun has warmed. It slips into the pool and hides in the slippery, green algae growing on the side.

The algae have been gathering energy all day. The sun and the nutrients in the pool's water are the sources of the energy. Some of the nutrients come from the rocks around the pool. Other nutrients come from the wastes of other animals and plants in the pool. Those animals and plants have been eating and decomposing all day.

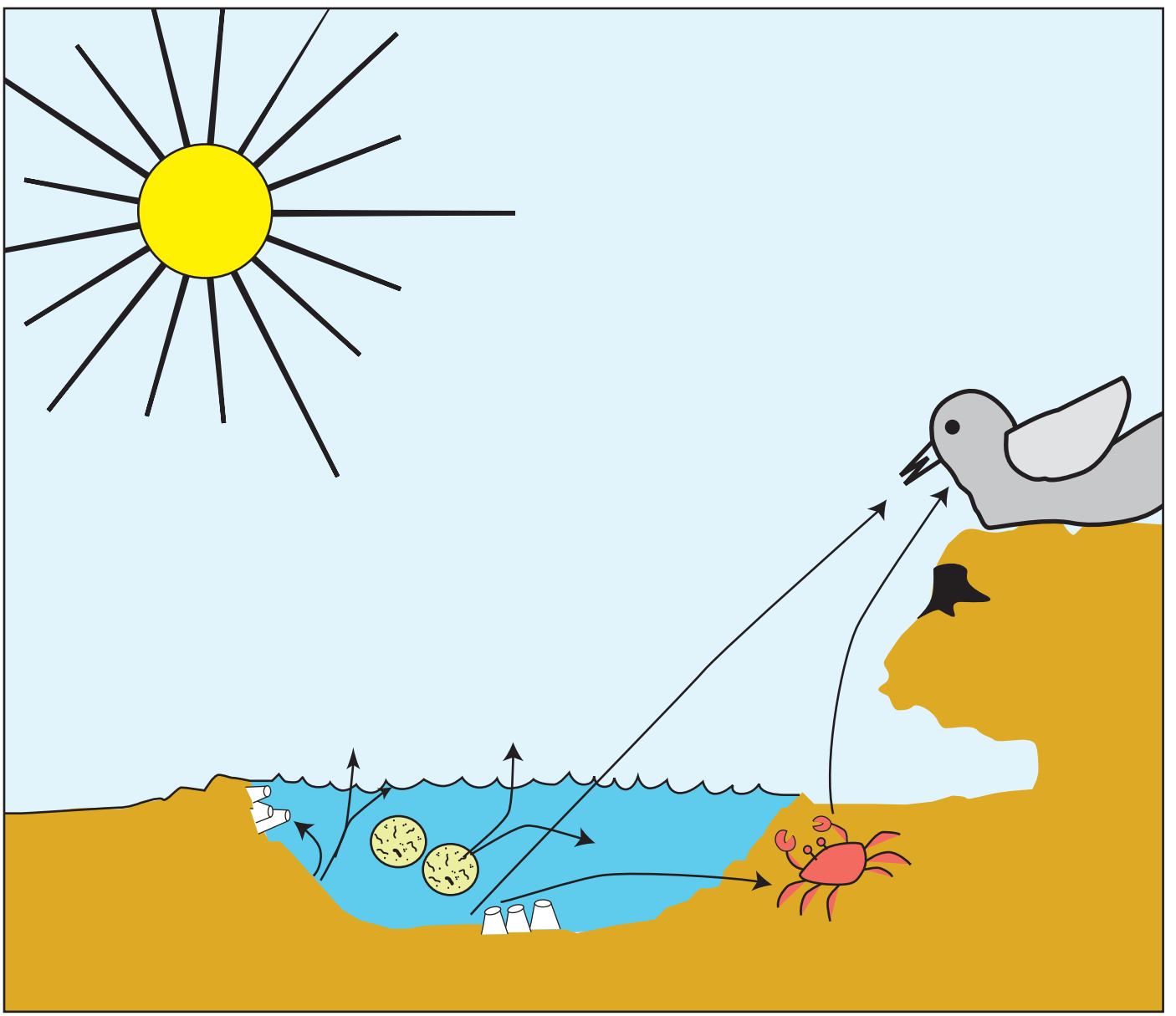
The crab is not interested in the algae right now. It wants the little pieces of a fish that died in the pool earlier. Tiny plankton and barnacles in the pool have already started to feed on the fish matter. But the crab is larger and will use its claws to take some of the fish matter from them.

From the top of the nearby rock, a seagull watches the action in the pool. The gull could eat the dead fish, but the live crab looks much tastier. The seagull steps over its waste on the rock, on which bacteria have already begun to feed. It then hops down to the pool. The crab does not see the seagull's shadow until it is too late.

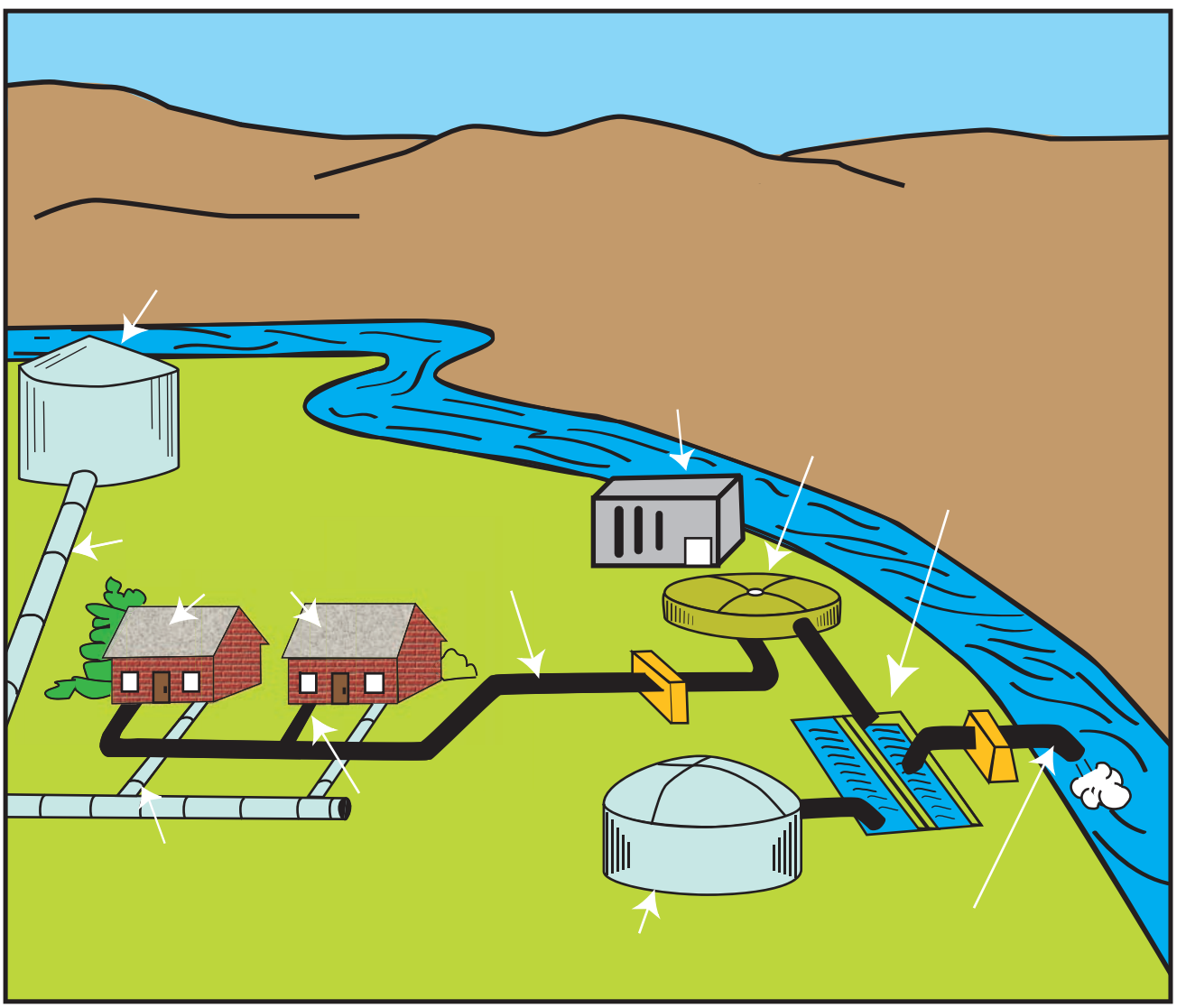


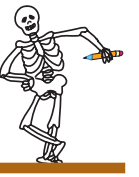
Use words and arrows to show how the characters in the stories are connected.

Decomposition at the Coast



This drawing shows a wastewater management system. Go through each part with your teacher. Then mark where decomposers work in the system.





We Could Not Do It Without Them!

Think about what you have learned about decomposers and decomposition.

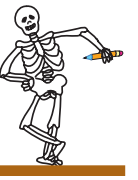
Then answer these questions:

1. How do decomposers help all living things?

2. How do communities manage waste by using decomposers?

3. Circle the organisms that are part of the wastewater management system:

mold bacteria sea gulls sludge plankton scavengers



There are many types of soils. You and your partner will look at two types of soil and decide which would be best for farming.

As you look at the two soils, answer these questions:

Sample A: (1 point each)

What color is the soil? _____

What does the soil feel like in your hand? _____

What does the soil look like under the magnifying glass? _____

_____

What does the soil smell like? (Breathe gently.) _____

Sample B: (1 point each)

What color is the soil? _____

What does the soil feel like in your hand? _____

What does the soil look like under the magnifying glass? _____

_____

What does the soil smell like? (Breathe gently.) _____

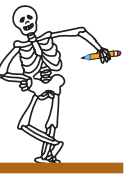
_____

Circle an answer: (1 point each)

Which soil has more humus? **Sample A** **Sample B**

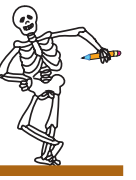
Which soil would be best for growing crops? **Sample A** **Sample B**

In which soil would you expect to find an earthworm? **Sample A** **Sample B**



Think and Write:

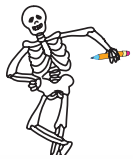
How do we depend on decomposers in growing our food? (4 points)



You have learned many things about decomposers. In the space below, write about how decomposers help you and your community.

Use the following words in your writing:

decomposition	humus	crops
compost	garbage	landfill
nutrients	matter	grow



Unit Title: **Life and Dea**
Grade: **4**
Discipline: **Science**
Standard Number: **4.2.**

Ca